DOCUMENT RESUME

ED 375 933 PS 022 562

AUTHOR Solomon, Daniel; Battistich, Victor
TITLE Students in Caring School and Classroom Communities.
INSTITUTION Developmental Studies Center, Oakland, CA.
SPONS AGENCY Annenberg Foundation, St. Davids, PA.; Danforth Foundation, St. Louis, Mo.; John D. and Catherine T. MacArthur Foundation, Chicago, IL.; Pew Charitable Trusts, Philadelphia, PA.; San Francisco Foundation, Calif.; Spunk Fund, Inc.; William and Flora Hewlett Foundation, Palo Alto, Calif.
PUB DATE 23 Aug 93
NOTE 32p.; Paper presented at the Annual Convention of the American Psychological Association (101st, Toronto, Canada, August 20-24, 1993).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Class Activities; Classroom Environment; *Community; Educational Environment; Elementary Education; Elementary Schools; *Elementary School Students; National Surveys; *School Attitudes; Socioeconomic Status; Student Adjustment; *Student Attitudes; Student Behavior; *Student School Relationship; Teacher Attitudes; Teacher Student Relationship

ABSTRACT

This study examined the sense of community felt by students and teachers at 24 elementary schools in 6 school districts in different regions of the United States. The study is based on the assumption that students who feel part of a caring community will adopt the community's norms and values. On a 38-item questionnaire, students indicated the degree to which they considered their schools and classrooms to be caring communities. The study also assessed the poverty level of the students; classroom activities and practices (through observations); teacher attitudes and reports of classroom practices and of school climate; and student attitudes, motives and behavior. The study found that: (1) teacher perceptions and reports of community generally corroborated those of students; (2) both community and poverty level related to many of the student, teacher, and observational measures, with more positive results in high community and low poverty schools; and (3) many of the community effects held in schools at different poverty levels. (MDM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

STUDENTS IN CARING SCHOOL AND CLASSROOM COMMUNITIES

Daniel Solomon and Victor Battistich

ED 375 933

Developmental Studies Center
2000 Embarcadero, Suite 305
Oakland, CA 94606-5300

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Daniel Solomon
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Presented at annual convention of
American Psychological Association
August 23, 1993

PS 022562

Acknowledgments

The work described in this paper is part of a larger project that is being funded by grants from: the William and Flora Hewlett Foundation; the San Francisco Foundation; the Robert Wood Johnson Foundation; the Danforth Foundation; the Stuart Foundations; the Pew Charitable Trusts; the John D. and Catherine T. MacArthur Foundation; the Annenberg Foundation; Spunk Fund, Inc.; the DeWitt Wallace-Reader's Digest Fund; the Louise and Claude Rosenberg Foundation; and the Center for Substance Abuse Prevention, U.S. Department of Health and Human Services.

BEST COPY AVAILABLE

ABSTRACT

Students in 24 elementary schools indicated the degree to which they considered their schools and classrooms to be *caring communities*—with mutually concerned and supportive members who have opportunities to participate actively and meaningfully in the community's activities and decision-making. We also assessed: the poverty level of the school; classroom activities and practices (through observations); teacher attitudes and reports of classroom practices and of school climate; and student attitudes, motives, and behavior. The study is based on the assumption that students who feel part of a caring community will adopt the community's norms and values. Two sets of analyses were conducted—one investigating relationships of community and poverty level to classroom practices and teacher attitudes and behaviors; the second investigating their relationships to the indices of student attitudes, motives, perceptions and behaviors.

Major findings were that (a) teacher perceptions and reports of community generally corroborated those of students; (b) both community and poverty level related to many of the student, teacher, and observational measures, with more positive results in high community and low poverty schools; (c) many of the community effects held in schools at different poverty levels; some of the strongest trends for community occurred, in fact, among the highest poverty schools, suggesting that schools that create a strong sense of community can mitigate some of the negative effects of poverty.

One of the basic tenets of socialization theories is that children will be most likely to adopt and feel committed to the norms and values of socializing agents when they feel bonded or attached to those agents, and that this happens when the agents satisfy their basic needs for feeling supported, cared about, and listened to (see Deci & Ryan, 1990). In previous work, we have argued that these assumptions apply not only to families but also to educational environments (Solomon, Watson, Battistich, Schaps, & Delucchi, 1992). We have defined the set of school and classroom characteristics that meet such needs as comprising a "caring community."

If the above assumptions are true, it implies that students who see their schools and classrooms as caring communities will tend to accept and act on the attitudes, motives, and goals that are promoted by the school. Our conception of community contains two major elements: mutually concerned and supportive community members, and the widespread opportunity to participate actively and meaningfully in the community's activities and decision-making.

Although these or similar assumptions seem to be gaining widespread acceptance in the educational community, they have generated relatively little research thus far. In addition to our own work, prior studies dealing with this issue have been conducted by Higgins, Power & Kohlberg (1984), Bryk & Driscoll (1988), and Arhar & Kromrey (1993).

The present paper reports on data that examined the sense of community through two sets of analyses—one investigating classroom practices and teacher attitudes and behaviors that relate to the sense of community, as we have defined it; the second investigating the relationships of community to indices of various student attitudes, motives, perceptions and behaviors.

Procedures

Data relevant to the above hypotheses were collected as part of a larger study of students, teachers, and their schools and classrooms in six urban and suburban school districts—three on the west coast, one in the upper south, one in the southeast, and one in the northeast. Four elementary schools from each of the six districts participated in the study. Classrooms in each school were observed on four occasions during the 1991-92 school year, and a series of questionnaires was given to students in the upper three grades in each school (grades 3-5 in four districts; grades 4-6 in two). Teachers were also given questionnaires asking for descriptions of their classroom practices, their educational beliefs and attitudes, and their feelings of satisfaction as teachers.

Students' sense of their *classroom* as a caring community was assessed with a scale composed of two subscales, representing the two elements of community, as we conceive it. The first, representing their feeling of mutual concern and respect in the classroom, contains 14 items (alpha=.82), including "Students in my class are willing to go out of their way to help someone," "My class is like a family" "Students in my class help each other learn," and "Students in my class

just look out for themselves" (reflected). The second, representing their feeling that students have the opportunity for meaningful participation in classroom planning and decision-making, contains 10 items (alpha=.80) including "In my class the teacher and students decide together what the rules will be," and "In my class the teacher and students together plan what we will do." The alpha of the total 28-item classroom community scale was .85.

Students' sense of the *school* as a caring community was assessed with a scale composed of 14 items (alpha=.85), including "Students in this school help each other, even if they are not friends," "I feel that I can talk to the teachers in this school about things that are bothering me," "People care about each other in this school," and "Students at this school work together to solve problems." (Because we believed that students' opportunities for autonomy and participation in decision-making would occur primarily in the classroom, we did not create a scale representing this aspect of community for the school measure.)

Finally, we created an overall community index by combining the school and classroom scales, resulting in a 38-item scale (alpha=.91). The analyses reported in this paper involve this overall measure.

The schools in this study served populations across a broad range of socioeconomic levels. We created a school-level poverty index from data on the percentage of students in each school who were eligible for free or reduced lunches. Scores on this index ranged from 2 to 95% (median=27%) among the schools in this sample.

Data from the classroom observations, which involved the use of a structured observation system designed for this project, were aggregated across visits. Six scales were derived: *prosocial emphasis* (alpha=.83), *teacher warmth and supportiveness* (alpha=.84), *academic emphasis* (alpha=. 73), *provision for student autonomy and decision-making* (alpha=.76), *student collaboration* (alpha=.74), and *quality of didactic instruction* (alpha=.73).

The teacher questionnaire produced scales representing several domains, including descriptions of their own activities and practices (e.g., *use of extrinsic rewards and punishments* [alpha=. 81], *provision for student autonomy and decision-making* [alpha=. 66], *amount of student collaboration* [alpha=. 66], and *amount of teacher collaboration* [alpha=.77]), general attitudes about teaching (including *teacher as sole authority* [alpha=. 71], *belief in fixed (rather than fluid) learning potential* [alpha=.67], and *constructivist beliefs about learning* [alpha=.79]), motivation and self-assessment (including *desire to improve as a teacher* [alpha=.67], *sense of efficacy as a teacher* [alpha=.60], and *job satisfaction* [alpha=.80]), and their perceptions of the school climate (including *collegiality of the teaching staff* [alpha=.90], *supportiveness of parents* [alpha=.86], *supportiveness of the principal* [alpha=.89], *positive student relations* [alpha=.89], and *openness to innovation* [alpha=.67]).

Students were given a total of four questionnaires, two in the fall or winter and two in the spring. Scales from these questionnaires ranged across several domains, including: academic attitudes, motives and behavior (including *frequency of reading* [1 item], *enjoyment of class* [alpha=.62], *liking for school* [alpha=.78], *achievement orientations* [alphas=.78, .79. .80], *trust in, and respect for teachers* [alpha=.84], *educational expectations* and *aspirations* [1 item each], and *inductive reasoning skill* [alpha=.69], and social and personal attitudes, motives and behavior (including *concern for others* [alpha=.73], *sense of autonomy* [alpha=.58], *sense of efficacy* [alpha=.79], *conflict resolution skill* [alpha=.82], *democratic values* [alpha=.68], *self esteem* [alpha=.79], *and social competence* [alpha=.80]. Questions about some problematic behaviors (e.g., delinquent acts [alpha=.84], and single items representing cigarette smoking, alcohol and drug use) were also asked of students in the top elementary grade (5th or 6th).

Analysis

Although preliminary analyses revealed many substantial relationships between the above variables and the measure of community, we also saw that community was significantly related to the poverty level of the school (r=–.61, p<.01), which was, itself, related to many of the other variables. Therefore, in order to determine the degree to which the community effects were dependent on, or independent of, the poverty status of the school, we conducted a series of multivariate and univariate analyses of variance, with the schools trichotomized with respect to both their mean community scores and their poverty levels. The low poverty schools ranged from 2 to 14% of students receiving free or reduced lunches, the moderate poverty schools ranged from 20 to 38%, and the high poverty schools ranged from 46 to 95%. The distributions of schools, classrooms, and students on the two variables combined are shown in Table 1.* (Because of missing data, the classroom and student Ns for particular analyses were generally slightly smaller than those shown in this table.) Because of the substantial relationship between community and poverty, three of the cells shown in the upper part of Table 1 are represented by only one school.

Two sets of analyses were done: the first investigated the classroom and teacher variables, and therefore used the classroom as the unit of analysis (with Ns ranging from 171-199); the second investigated the student variables, and therefore used the student as the unit of analysis, with Ns of about 4500 for measures assessed at all three grade levels, and about 1400 for measures assessed at only one grade level.

---

* It is worth noting that, not surprisingly, poverty level was directly related to the percentage of students receiving Chapter 1 services (r=.69, p<.02), and was inversely related to school mean scores on standardized achievement tests (r=–.87, p<.001). Poverty level was also correlated with the percentage of minority students (r=.49, p<.02), but was unrelated to school size (r=.04). Sense of community, on the other hand, was significantly correlated with student achievement (aggregated to the school level; r=.46, p<.05), but was not significantly associated with school size (r=.08), percent of students receiving Chapter 1 services (r=.03), or percentage of minority students (r=–.16).

Results and Discussion

Classroom and Teacher Correlates of Community

Separate 3 (community) X 3 (poverty level) multivariate analyses of variance run on the classroom observational measures and the teacher questionnaire scales both showed significant effects for Community ($Fs>1.91$, $ps<.002$), Poverty ($Fs>2.25$, $ps<.001$) and the Community by Poverty interaction ($Fs>1.42$, $ps<.01$). A summary of the univariate analyses of these measures is shown in Table 2, with cell means in Table 3.

Consistency of parallel indicators of community. A number of the observational and teacher questionnaire measures also reflected aspects of community, and showed corroborative relationships with the student-based measure. Thus, students in higher community-level schools were observed to exercise greater autonomy, to participate more in classroom decision-making, and to collaborate more with one another. Consistent results from the teacher questionnaire indicated that schools that were seen as communities by students were seen in a similar way, for the most part, by teachers. Teachers in high community schools were most likely to report that students got along well with each other and with teachers, that parents were supportive, and that the school faculty was collegial, collaborative, and competent.

Poverty and school experience. A number of these variables also showed significant relationships with the school's poverty level (with higher scores, overall, in the more affluent schools). Students in the higher poverty schools had less opportunity to be autonomous and participate in decision-making, and experienced less emphasis on both academics and prosocial values. These poverty findings are consistent with the strong negative relationship found between sense of community and poverty level: students in higher poverty schools are less likely to experience a caring and supportive school environment. There was also evidence, however, that the positive effects of community were, in some instances, particularly pronounced for the higher poverty schools (see Fig. 1 for an example of this trend).

Teacher attitudes. Several teacher attitude measures showed significant community effects. Teachers in high community schools were most likely to see teaching as efficacious, to feel personally committed to teaching, and to be open to personal growth, and were least likely to believe that learning potential is fixed. Interestingly, these attitudinal measures tended not to be related to the poverty level of the school. In fact, the only clear trend—for *desire to improve as a teacher*—showed the highest scores for the highest poverty schools (although all the scores were in a high range; see Table 3). Thus, the poverty-related differences in school atmosphere and classroom experiences do not seem to be a function of differences in teacher attitude, at least as indicated by these measures. The community differences in these attitudinal variables held up across poverty levels; the only interaction (for *fixed learning potential*) again showed the largest community effect occurring among the highest poverty schools. (See Fig. 2). We can't tell from

these data, of course, whether positive teacher attitudes are the cause or the result of the community status of the school; it seems probable that there are reciprocal effects between the two.

Student Correlates of Community

Multivariate analyses of variance run on data from questionnaires given to students at all three grades and on those given to students only at single grades all showed significant effects for Community (Fs>2.34, ps<.001), Poverty (Fs>3.15, ps<.001) and the Community by Poverty interaction (Fs>1.61, ps<.001). A summary of the univariate analyses of these measures is shown in Table 4, with cell means in Table 5.

Academic attitudes, motives, and behavior. Similar patterns of relationship were found with two measures that can be considered to represent the child's attachment to school—*enjoyment of class* and *liking for school* (see Fig. 3). In each case there were significant effects for both community and poverty level, with highest scores for students in high community and in low poverty schools. In both instances, however, the community effect was limited to students in the moderate and high poverty schools. Or, to put it another way, the negative effect of poverty level on students' attachment to school only occurred among the low community schools; there was no poverty differential among the average and high community schools.

The questionnaires also included measures of learning orientation developed by Nicholls (1989). These included three orientations: *task orientation* (tendency to feel most satisfied when schoolwork is challenging and leads to improved understanding), *ego orientation* (tendency to feel most satisfied when schoolwork allows one to demonstrate better performance than other students), and *work avoidance* (tendency to feel most satisfied when work is easy). Each of these variables was significantly and positively affected by the school's community level, and for the first and third the effect was greatest in the high poverty schools (see Fig. 4 for the results for *task orientation*).

Sense of community was also positively related to a number of other achievement-related measures, as indicated in Table 3. While most of these variables also showed significant poverty effects—with scores generally lowest among students in the highest poverty schools—the general increase with increases in community occurred, on the whole, at all poverty levels (see Figs. 5, & 6).

Social and personal attitudes, motives and behavior. Most of these variables also showed significant main effects for both community and poverty, with the most positive scores occurring for students in the high community schools and the low or moderate poverty schools. (A few also showed significant interactions, but, in general, the community trends held across poverty levels.) Students in high community schools reported the greatest interpersonal concern, prosocial

behavior, interpersonal skill, and feelings of efficacy. They also reported less smoking and less delinquent behavior (see Figs. 7-9 for examples of some of these).

General Discussion

The above findings indicate that: (a) schools vary greatly in the degree to which they can be characterized as caring communities; (b) some of them, however, clearly are perceived as such by their students (and these perceptions are generally corroborated by teacher reports and independent observations of classroom practices); and (c) when schools are successful in creating a sense of community, students (and teachers) appear to benefit in many ways.

The obtained relationships between the sense of community and the student measures seem consistent with the notion that students who experience caring and supportive relationships in school will feel attached to the school community, and will therefore come to accept the norms and values that are enunciated and promoted by the school. Of course, the very establishment and maintenance of a caring community, as we have defined it, conveys a set of values in itself: values concerning mutual concern and respect, the importance of recognizing and valuing individual members' contributions (and of giving them the opportunities to make such contributions), and the obligation of each member to attend to the needs and welfare of the community. A caring community, in other words, simultaneously both conveys a set of values, and helps establish the motivation to abide by them.

The findings also suggest that it is beneficial and satisfying for teachers, as well as students, to work in a school that is felt to be a community, and that there are a number of practices teachers can undertake (e.g., promote student collaboration and participation in decision-making) to help bring such communities about.

The findings obtained with the poverty level of the school are disheartening in some respects, but encouraging in others. The relationship found between poverty and the sense of community, as well as many of the other measures included in this study, suggests that school experience is less pleasant and rewarding, on the whole, for students (and teachers) in poor than in affluent school communities. It is interesting, however, that these differences were not related to teacher attitudes or beliefs about teaching and learning.

Although the deleterious effects of poverty are well known, the most encouraging aspect of the present findings is the suggestive evidence that some of the negative effects of poverty can be mitigated if the school is successful in creating a caring community for its members. Although community was strongly correlated with the school's level of poverty, and poverty was itself significantly related to many of the other variables examined, most of the community effects persisted when poverty was taken into account. Further, in a number of instances the sense of community showed its strongest positive trends for the high poverty schools. (A consistent finding, that interdisciplinary teaming had greater effects on student "bonding" in low- than in

high-SES schools, has been reported by Arhar &Kromrey, 1993). This suggests that a caring, supportive and responsive community may be particularly important in schools in poor communities.

The uneven distribution of schools across the community-by-poverty cells, with three cells represented by a single school each, is of course a problem in these data, and warrants some caution in interpreting the findings. The limitation of the data to a single school year also constrains the interpretations that can be made. We will be collecting similar data in the same schools over the next two years, which will enable us to examine causal trends and the linkages between sets of variables more completely.

References

Arhar, J. M., & Kromrey, J. D. (1993). Interdisciplinary teaming in the middle level school: Creating a sense of belonging for at-risk middle level students. Paper presented at meeting of American Educational Research Association, Atlanta, Georgia.

Bryk, A. S., & Driscoll, M. E. (1988). The school as community: Theoretical foundations, contextual influences, and consequences for students and teachers. Madison: National Center on Effective Secondary Schools. University of Wisconsin.

Deci, E. L., & Ryan, R. M. (1990). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.) Nebraska symposium on motivation, Vol. 38. Lincoln, Neb: University of Nebraska Press.

Higgins, A., Power, C., & Kohlberg, L. (1984). The relationship of moral atmosphere to judgments of responsibility. In J.M. Kurtines & J.L. Gewirtz (Eds.). Morality, moral behavior, and moral development. New York: Wiley.

Nicholls, J. G. (1989). The competitive ethos and democratic education. Cambridge: Harvard University Press

Solomon, D., Watson, M., Battistich, V., Schaps, E., & Delucchi, K. (1992.). Creating a caring community: Educational practices that promote children's prosocial development. In F. K. Oser, A. Dick, & J.-L. Patry (Eds.), Effective and responsible teaching: The new synthesis. San Francisco: Jossey-Bass.

Table 1

Numbers of Schools, Teachers, and Students in Each Community-by-Poverty Grouping

---

Poverty Level	Sense of Community			
A. Schools	Low	Average	High	TOTAL
Low	1	1	5	7
Moderate	3	2	3	8
High	4	4	1	9
TOTAL	8	7	9	24

B. Teachers/Classrooms				
Low	6	9	48	63
Moderate	17	8	13	38
High	54	46	6	106
TOTAL	77	63	67	207

C. Students				
Low	137	196	1,086	1,419
Moderate	471	300	669	1,440
High	847	730	93	1,670
TOTAL	1,455	1,226	1,848	4,529

Table 2

Summary of Relationships with Classroom, School, and Teacher Characteristics

Variable	F-Value Community	Poverty	Comm x Pov
Observed Classroom Practices			
Prosocial Emphasis	4.18*	4.83**	1.71
Warmth and Supportiveness	2.60+	<1.00	2.56*
Academic Emphasis	1.69	3.64*	<1.00
Student Autonomy & Decision Making	15.36***	14.07***	2.98*
Student Collaboration	6.08**	1.13	6.20***
Quality of Didactic Instruction	<1.00	<1.00	1.16
Class Meetings	<1.00	2.89+	2.03+
Self-Reported Classroom Practices			
Student Autonomy and Decision Making	<1.00	<1.00	<1.00
Use of Extrinsic Reward and Punishment	4.99**	1.11	1.83
Student Collaboration	1.84	<1.00	1.70
Teacher Collaboration	3.62*	4.01*	<1.00
School Climate			
Supportiveness of Parents	9.01***	7.67**	2.09+
Positive Student Relations	20.15***	2.08	5.76***
Supportiveness of Principal	3.57*	9.91***	2.44*
Quality of Teaching Staff	7.98***	1.52	2.65*
Collegiality of Teaching Staff	5.48**	8.36***	2.87*
Openness to Innovation	3.41*	<1.00	<1.00
Participatory Decision Making	1.44	2.65+	4.06**

Table 2 (Continued)

Variable	F-Value Community	Poverty	Comm x Pov
Teacher Attitudes			
Teacher as Sole Authority	2.53^{+}	<1.00	1.22
Constructivism	<1.00	<1.00	1.01
Efficacy of Teaching	3.67*	<1.00	<1.00
Fixed Learning Potential	5.50**	1.05	2.61*
Commitment to Teaching	4.67*	1.68	1.83
Openness to Personal Growth	6.48**	4.16*	1.16
Desire to Improve as a Teacher	2.46^{+}	3.17*	<1.00
Control Ideology	<1.00	<1.00	<1.00
Sense of Efficacy as a Teacher	<1.00	<1.00	<1.00
Job Satisfaction	2.95^{+}	<1.00	<1.00

Note. All multivariate effects are statistically significant for both self-report and observational measures: School Community $Fs > 1.91$ $ps < .002$; Poverty $Fs > 2.25$, $ps < .001$; Community x Poverty interaction $Fs < 1.42$, $ps < .01$.

$^{+}p < .10$ $^{*}p < .05$ $^{**}p < .01$ $^{***}p < .001$

Table 3

Mean Classroom, School, and Teacher Characterictics by Level of School Community and Student Poverty

Variable	% Poor Students	Community		
		Low	Average	High
Observed Classroom Practices				
Prosocial Emphasis	Low	$.10_{ab}$	$.15_{b}$	$.07_{ab}$
	Moderate	$.04_{a}$	$.09_{ab}$	$.05_{ab}$
	High	$.04_{a}$	$.07_{ab}$	$.09_{ab}$
Warmth and Supportiveness	Low	1.22	1.39	1.26
	Moderate	1.20	1.36	1.31
	High	1.31	1.26	1.21
Academic Emphasis	Low	.60	.65	.53
	Moderate	.53	.54	.52
	High	.49	.54	.52
Student Autonomy & Decision Making	Low	$.25_{abcd}$	$.32_{cd}$	$.28_{bcd}$
	Moderate	$.11_{ab}$	$.38_{d}$	$.21_{abcd}$
	High	$.10_{a}$	$.19_{abc}$	$.16_{abc}$
Student Collaboration	Low	$.24_{ab}$	$.36_{ab}$	$.18_{ab}$
	Moderate	$.14_{a}$	$.19_{ab}$	$.27_{ab}$
	High	$.09_{a}$	$.18_{ab}$	$.40_{b}$
Quality of Didactic Instruction	Low	1.65	1.60	1.74
	Moderate	1.55	1.69	1.60
	High	1.62	1.61	1.62
Class Meetings	Low	.07	.04	.02
	Moderate	.01	.01	.01
	High	.01	.04	.04

Table 3 (continued)

Variable	% Poor Students	Community		
		Low	Average	High
Self-Reported Classroom Practices				
Student Autonomy and Decision Making	Low	2.91	2.92	2.78
	Moderate	2.78	2.79	2.88
	High	2.71	2.69	2.96
Use of Extrinsic Reward and Punishment	Low	3.23	2.31	2.84
	Moderate	3.23	2.72	2.52
	High	3.25	3.18	2.73
Student Collaboration	Low	3.54	3.61	3.41
	Moderate	3.27	3.57	3.85
	High	3.36	3.57	3.70
Teacher Collaboration	Low	2.94	2.52	3.23
	Moderate	3.15	3.34	3.47
	High	3.19	3.15	3.54
School Climate				
Supportiveness of Parents	Low	4.10_{c}	3.60_{abc}	4.15_{c}
	Moderate	3.33_{abc}	3.58_{abc}	3.78_{abc}
	High	2.88_{a}	2.99_{ab}	4.00_{bc}
Positive Student Relations	Low	3.81_{abc}	3.38_{ab}	4.04_{bc}
	Moderate	3.01_{a}	3.69_{abc}	3.69_{abc}
	High	2.91_{a}	3.21_{ab}	4.65_{c}
Supportiveness of Principal	Low	4.38_{ab}	4.45_{ab}	4.68_{ab}
	Moderate	3.65_{a}	4.01_{ab}	3.90_{ab}
	High	4.11_{ab}	3.86_{ab}	4.78_{b}

Table 3 (continued)

Variable	% Poor Students	Community		
		Low	Average	High
Quality of Teaching Staff	Low	4.06_{ab}	4.10_{ab}	4.23_{ab}
	Moderate	3.81_{a}	3.99_{ab}	4.02_{ab}
	High	3.63_{a}	3.86_{a}	4.80_{b}
Collegiality of Teaching Staff	Low	3.91_{ab}	3.97_{ab}	4.09_{ab}
	Moderate	3.58_{a}	3.57_{a}	3.66_{a}
	High	3.57_{a}	3.97_{ab}	4.87_{b}
Openness to Innovation	Low	3.63	3.54	3.77
	Moderate	3.20	3.58	3.54
	High	3.18	3.34	3.88
Participatory Decision Making	Low	4.00	4.25	4.31
	Moderate	3.46	4.09	3.79
	High	3.99	3.54	4.30
<u>Teacher Attitudes</u>				
Teacher as Sole Authority	Low	2.33	2.52	2.48
	Moderate	2.63	2.39	2.23
	High	2.61	2.39	1.89
Constructivism	Low	4.22	4.11	4.06
	Moderate	4.08	4.13	4.24
	High	3.98	4.09	4.37
Efficacy of Teaching	Low	3.97	4.29	4.17
	Moderate	4.04	4.24	4.31
	High	4.02	4.13	4.48
Fixed Learning Potential	Low	2.40_{ab}	2.37_{ab}	2.42_{ab}
	Moderate	2.50_{ab}	2.52_{b}	2.33_{ab}
	High	2.62_{b}	2.55_{b}	1.76_{a}
Commitment to Teaching	Low	4.26	4.37	4.28
	Moderate	3.68	4.26	4.28
	High	3.93	4.11	4.55

Table 3 (continued)

Variable	% Poor Students	Community		
		Low	Average	High
Openness to Personal Growth	Low	4.17_{ab}	4.14_{ab}	4.41_{ab}
	Moderate	3.87_{a}	4.22_{ab}	4.23_{ab}
	High	4.05_{ab}	4.34_{ab}	5.00_{b}
Desire to Improve as a Teacher	Low	4.39	4.29	4.34
	Moderate	4.33	4.37	4.54
	High	4.48	4.46	4.93
Control Ideology	Low	8.25	6.89	6.67
	Moderate	6.76	7.57	7.03
	High	5.83	6.21	7.85
Sense of Efficacy as a Teacher	Low	3.80	3.67	3.71
	Moderate	3.77	3.75	3.90
	High	3.56	3.75	3.80
Job Satisfaction	Low	3.83	4.00	4.02
	Moderate	3.63	4.00	3.88
	High	3.67	3.95	4.20

Note. For each variable, means that do not have a subscript in common differ at $p < .05$ by Scheffe post-hoc comparison.

Table 4

Summary of Effects on Students

Variable	F-Value Community	Poverty	Comm x Pov
Academic Attitudes, Motives, and Behavior			
Frequency of Reading Outside of School	6.53**	4.10*	3.52**
Enjoyment of Reading	3.81*	1.59	4.44**
Enjoyment of Class	13.30***	3.26*	3.71**
Liking for School	16.25***	9.19***	5.53***
Task Orientation	17.34***	3.71*	1.73
Ego Orientation	5.79**	6.07**	2.22+
Work Avoidance	16.98***	8.32***	7.10***
Preference for Challenge[1]	3.74*	6.28**	4.37**
Intrinsic Academic Motivation	1.68	14.04***	<1.00
Academic Self-Esteem	1.26	34.09***	2.15+
Trust in, and Respect for Teachers[2]	14.35***	2.24	1.62
Enjoyment of Helping Others Learn	14.71***	12.30***	<1.00
Educational Aspirations[3]	3.97*	1.94	1.26
Educational Expectations[3]	6.67**	3.31*	<1.00
Inductive Reasoning Skill[3]	2.20	20.22***	2.06+
Social and Personal Attitudes, Motives, and Behavior			
Concern for Others	26.29***	33.95***	2.72*
Sense of Autonomy	2.51+	19.20***	1.07
Sense of Efficacy	5.08**	3.52*	<1.00

Table 4 (continued)

Variable	F-Value Community	Poverty	Comm x Pov
Conflict Resolution Skills	20.30***	8.47***	2.56*
Acceptance of Outgroups[1]	4.32*	4.23*	1.11
Intrinsic Prosocial Motivation	4.62**	15.90***	3.01*
Democratic Values	11.53***	62.61***	7.62***
Altruistic Behavior	20.22***	5.70**	3.76**
General Self-Esteem	1.16	15.54***	1.85
Loneliness at School[2]	2.59+	5.84**	1.64
Social Competence	11.50***	12.72***	1.48
Use of Cigarettes[3]	12.68***	5.64**	1.51
Use of Alcohol[3]	3.35*	9.50***	3.34*
Use of Marijuana[3]	1.58	4.35*	<1.00
Number of Delinquent Acts[3]	4.89**	18.39***	2.80*
Number of Times Victimized at School[3]	2.29	5.53**	1.31

Note. All multivariate effects are statistically significant at all grade levels: School Community Fs > 2.34, ps < .001; Poverty Fs > 3.15, ps < .001; Community x Poverty interaction Fs > 1.61, ps < .001.

[1]Grade 3 or 4 only.

[2]Grade 4 or 5 only.

[3]Grade 5 or 6 only.

$^{+}p < .10$ $^{*}p < .05$ $^{**}p < .01$ $^{***}p < .001$

Table 5

Mean Student Outcome Scores by Level of School Community and Student Poverty

Variable	% Poor Students	Community: Low	Community: Average	Community: High
Academic Attitudes, Motives, and Behavior				
Frequency of Reading Outside of School	Low	3.48_{ab}	3.63_{ab}	3.80_{b}
	Moderate	3.50_{ab}	3.73_{b}	3.50_{ab}
	High	3.27_{a}	3.40_{ab}	3.64_{ab}
Enjoyment of Reading	Low	4.09_{a}	4.22_{ab}	4.17_{ab}
	Moderate	4.12_{a}	4.18_{ab}	4.14_{ab}
	High	4.17_{ab}	4.03_{a}	4.49_{b}
Enjoyment of Class	Low	4.02_{b}	3.89_{ab}	4.05_{b}
	Moderate	3.77_{ab}	3.96_{b}	4.08_{b}
	High	3.62_{a}	3.87_{ab}	4.08_{b}
Liking for School	Low	3.79_{bcd}	3.54_{abc}	3.88_{d}
	Moderate	3.48_{ab}	3.78_{bcd}	3.84_{cd}
	High	3.32_{a}	3.57_{abcd}	3.71_{bcd}
Task Orientation	Low	3.72_{ab}	3.76_{ab}	3.88_{abc}
	Moderate	3.80_{abc}	3.90_{abc}	3.99_{bc}
	High	3.65_{a}	3.85_{abc}	4.05_{c}
Ego Orientation	Low	3.77_{b}	3.50_{ab}	3.41_{ab}
	Moderate	3.46_{ab}	3.45_{ab}	3.45_{ab}
	High	3.44_{ab}	3.37_{a}	3.23_{a}
Work Avoidance	Low	3.75_{c}	3.81_{c}	3.37_{ab}
	Moderate	3.51_{bc}	3.57_{bc}	3.56_{bc}
	High	3.50_{bc}	3.60_{bc}	3.11_{a}

Table 5 (continued)

Variable	% Poor Students	Community: Low	Community: Average	Community: High
Preference for Challenge[1]	Low	1.54_{ab}	1.71_{bc}	1.70_{bc}
	Moderate	1.68_{abc}	1.65_{abc}	1.71_{c}
	High	1.60_{abc}	1.66_{abc}	1.52_{a}
Intrinsic Academic Motivation	Low	47.33_{a}	47.62_{a}	48.25_{ab}
	Moderate	49.18_{ab}	48.77_{ab}	48.99_{ab}
	High	49.16_{ab}	49.10_{ab}	49.80_{b}
Academic Self-Esteem	Low	3.99_{bcd}	4.08_{d}	4.02_{bcd}
	Moderate	4.05_{cd}	3.99_{bcd}	4.13_{d}
	High	3.65_{a}	3.78_{abc}	3.75_{ab}
Trust in, Respect for Teachers[2]	Low	1.99_{a}	2.17_{ab}	2.33_{b}
	Moderate	2.16_{ab}	2.23_{ab}	2.29_{ab}
	High	2.15_{ab}	2.20_{ab}	2.44_{b}
Enjoyment of Helping Others Learn	Low	4.01_{ab}	4.17_{b}	4.15_{ab}
	Moderate	4.07_{ab}	4.28_{b}	4.30_{b}
	High	3.86_{a}	4.08_{ab}	4.10_{ab}
Educational Aspirations[3]	Low	3.74	3.77	3.80
	Moderate	3.74	3.56	3.79
	High	3.53	3.55	3.83
Educational Expectations[3]	Low	3.57	3.48	3.65
	Moderate	3.53	3.46	3.63
	High	3.26	3.26	3.66
Inductive Reasoning Skill[3]	Low	56.68_{bc}	58.95_{c}	60.22_{c}
	Moderate	55.21_{abc}	55.89_{abc}	56.32_{abc}
	High	48.57_{ab}	53.84_{abc}	46.40_{a}
Social and Personal Attitudes, Motives, and Behavior				
Concern for Others	Low	3.48_{bc}	3.66_{c}	3.71_{c}
	Moderate	3.38_{ab}	3.66_{c}	3.68_{c}
	High	3.19_{a}	3.50_{bc}	3.25_{ab}

Table 5 (continued)

Variable	% Poor Students	Community		
		Low	Average	High
Sense of Autonomy	Low	2.36_{b}	2.30_{ab}	2.29_{ab}
	Moderate	2.29_{ab}	2.26_{ab}	2.26_{ab}
	High	2.20_{a}	2.22_{a}	2.18_{a}
Sense of Efficacy	Low	3.11	3.20	3.21
	Moderate	3.09	3.13	3.20
	High	3.03	3.02	3.17
Conflict Resolution Skills	Low	2.23_{a}	2.42_{ab}	2.81_{c}
	Moderate	2.56_{abc}	2.65_{bc}	2.86_{bc}
	High	2.50_{abc}	2.60_{bc}	2.67_{bc}
Acceptance of Outgroups[1]	Low	1.94_{a}	2.10_{ab}	2.15_{ab}
	Moderate	2.12_{ab}	2.14_{ab}	2.28_{b}
	High	2.15_{ab}	2.13_{ab}	2.17_{ab}
Intrinsic Prosocial Motivation	Low	49.50_{a}	50.71_{abc}	52.33_{bc}
	Moderate	51.72_{abc}	52.73_{bc}	53.25_{c}
	High	51.08_{abc}	50.81_{abc}	50.47_{ab}
Democratic Values	Low	2.88_{c}	2.94_{c}	2.98_{c}
	Moderate	2.78_{bc}	2.89_{c}	2.97_{c}
	High	2.65_{ab}	2.78_{bc}	2.46_{a}
Altruistic Behavior	Low	2.53_{ab}	2.44_{a}	2.69_{bc}
	Moderate	2.61_{ab}	2.61_{ab}	2.69_{bc}
	High	2.54_{ab}	2.61_{ab}	2.84_{c}
General Self-Esteem	Low	4.27_{ab}	4.09_{ab}	4.16_{ab}
	Moderate	4.32_{ab}	4.29_{ab}	4.41_{b}
	High	4.03_{a}	4.11_{ab}	4.15_{ab}
Loneliness at School[2]	Low	1.35	1.28	1.44
	Moderate	1.35	1.40	1.40
	High	1.53	1.42	1.55

Table 5 (continued)

Variable	% Poor Students	Community: Low	Community: Average	Community: High
Social Competence	Low	3.66_{a}	3.74_{ab}	3.77_{ab}
	Moderate	3.76_{ab}	3.88_{ab}	3.96_{b}
	High	3.63_{a}	3.65_{a}	3.87_{ab}
Use of Cigarettes[3]	Low	.30	.30	.10
	Moderate	.18	.16	.10
	High	.32	.28	.12
Use of Alcohol[3]	Low	$.72_{b}$	$.53_{ab}$	$.49_{ab}$
	Moderate	$.48_{ab}$	$.37_{a}$	$.46_{ab}$
	High	$.40_{a}$	$.47_{ab}$	$.30_{a}$
Use of Marijuana[3]	Low	.04	.04	.02
	Moderate	.03	.05	.01
	High	.10	.08	.06
Number of Delinquent Acts[3]	Low	1.18_{c}	1.00_{bc}	$.59_{ab}$
	Moderate	$.50_{ab}$	$.64_{abc}$	$.38_{a}$
	High	$.73_{abc}$	$.95_{bc}$	$.86_{abc}$
Number of Times Victimized at School[3]	Low	.95	.95	.72
	Moderate	.56	.77	.63
	High	.62	.80	.80

Note. For each variable, means that do not have a subscript in common differ at $p < .05$ by Scheffe post-hoc comparison.

[1]Grade 3 or 4 only.

[2]Grade 4 or 5 only.

[3]Grade 5 or 6 only.

Fig. 1. School Climate: Positive Student Relations

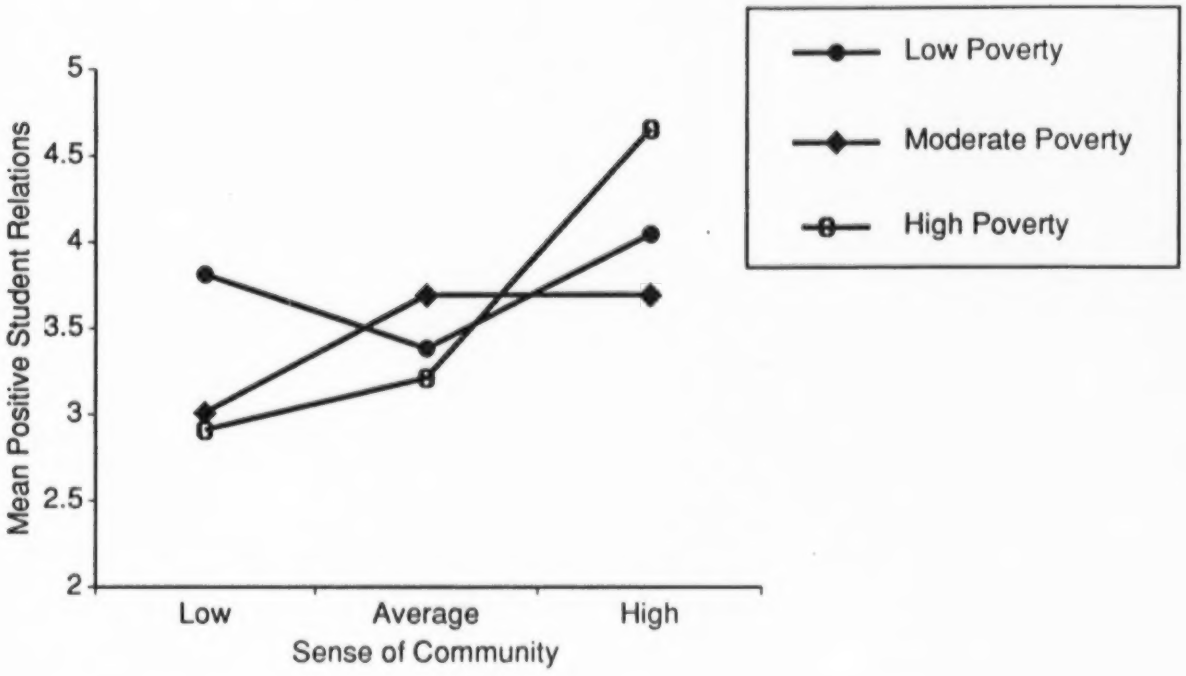

Fig. 2. Belief in Fixed Learning Potential

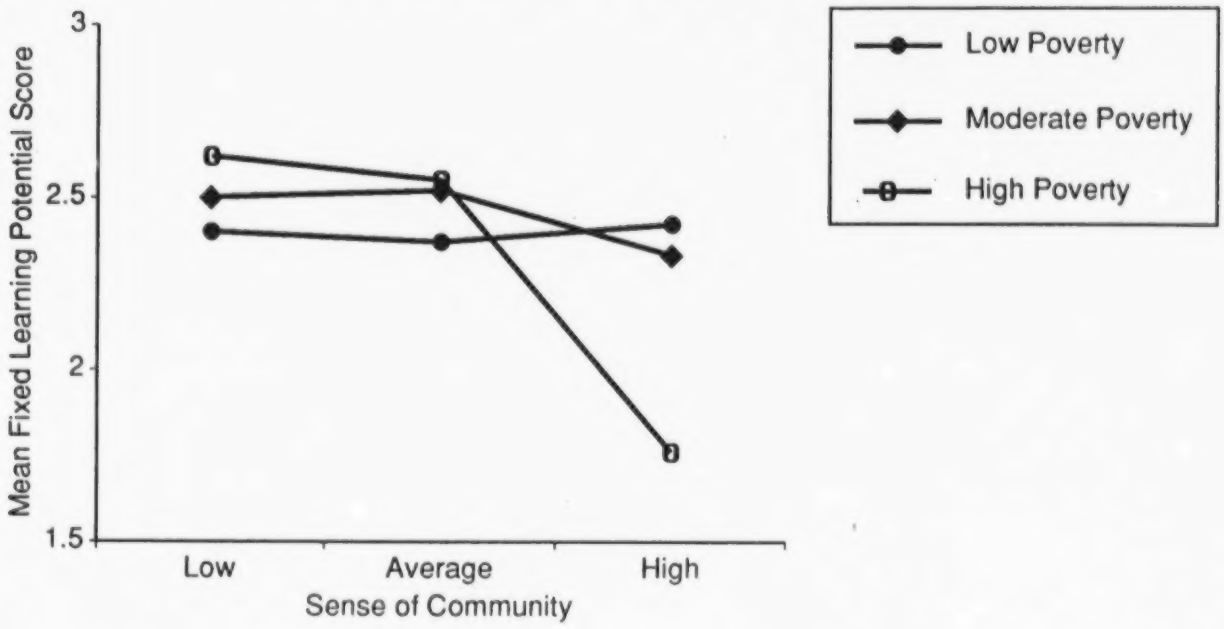

Fig. 3. Liking for School

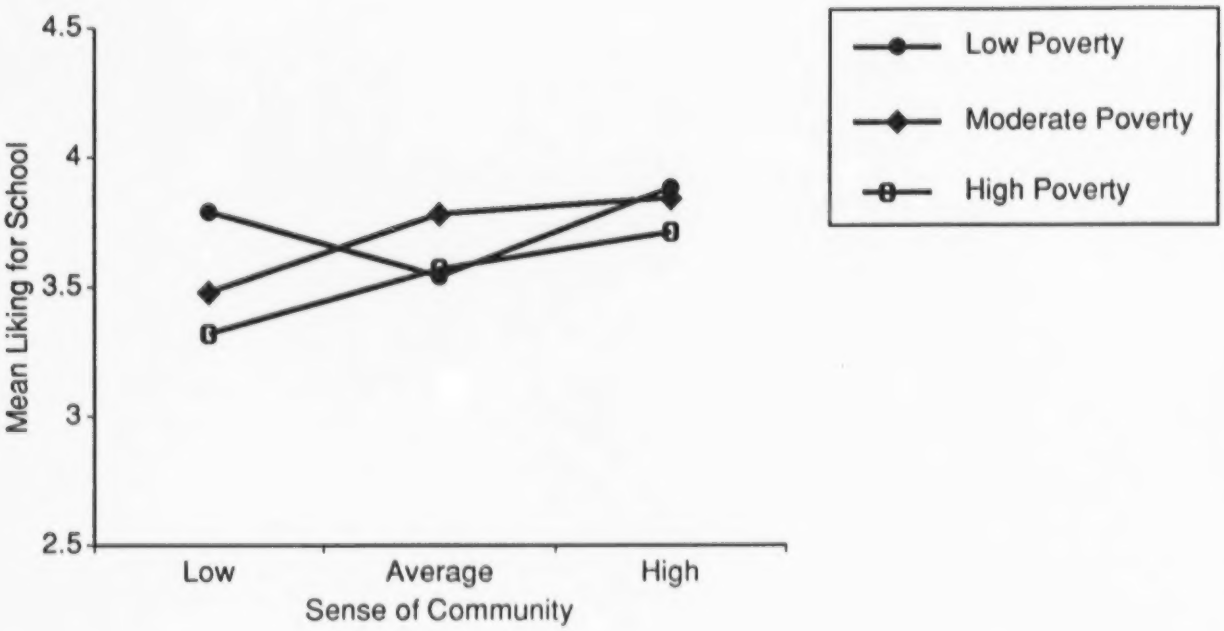

Fig. 4. Task Orientation

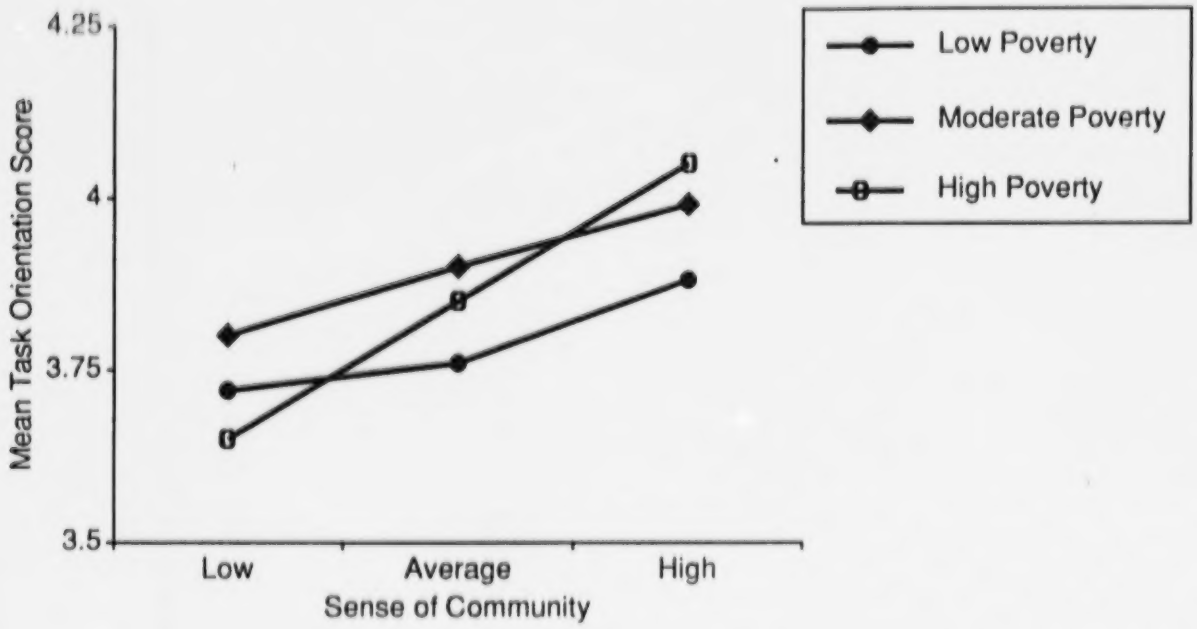

Fig. 5. Trust In and Respect For Teachers

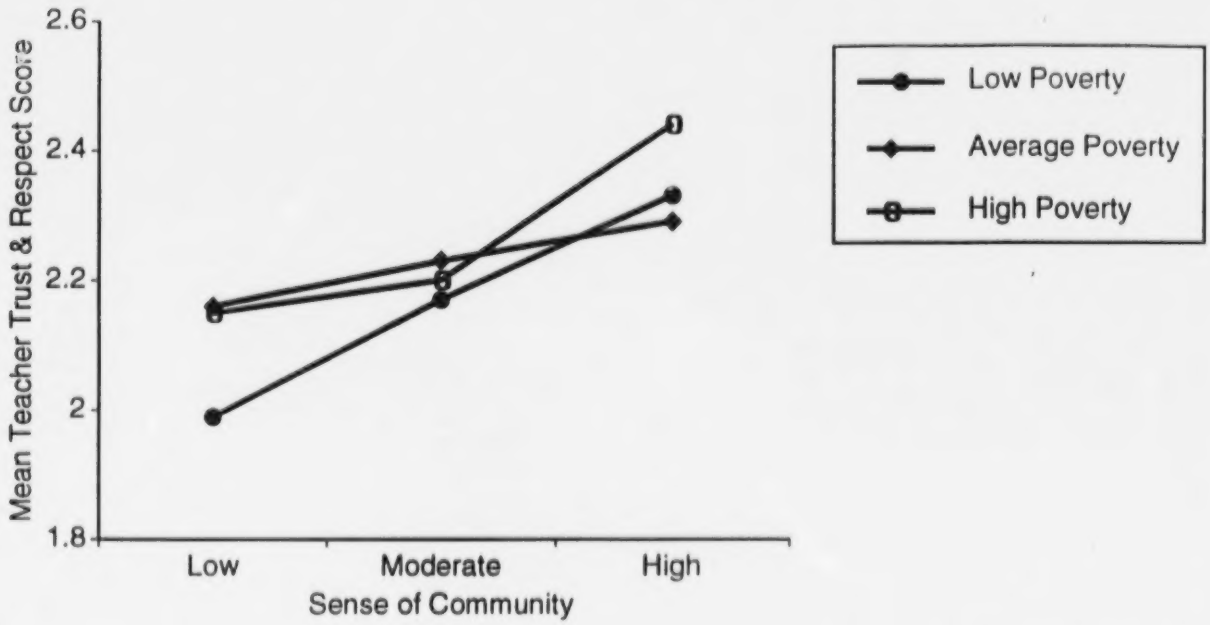

Fig. 6. Educational Expectations

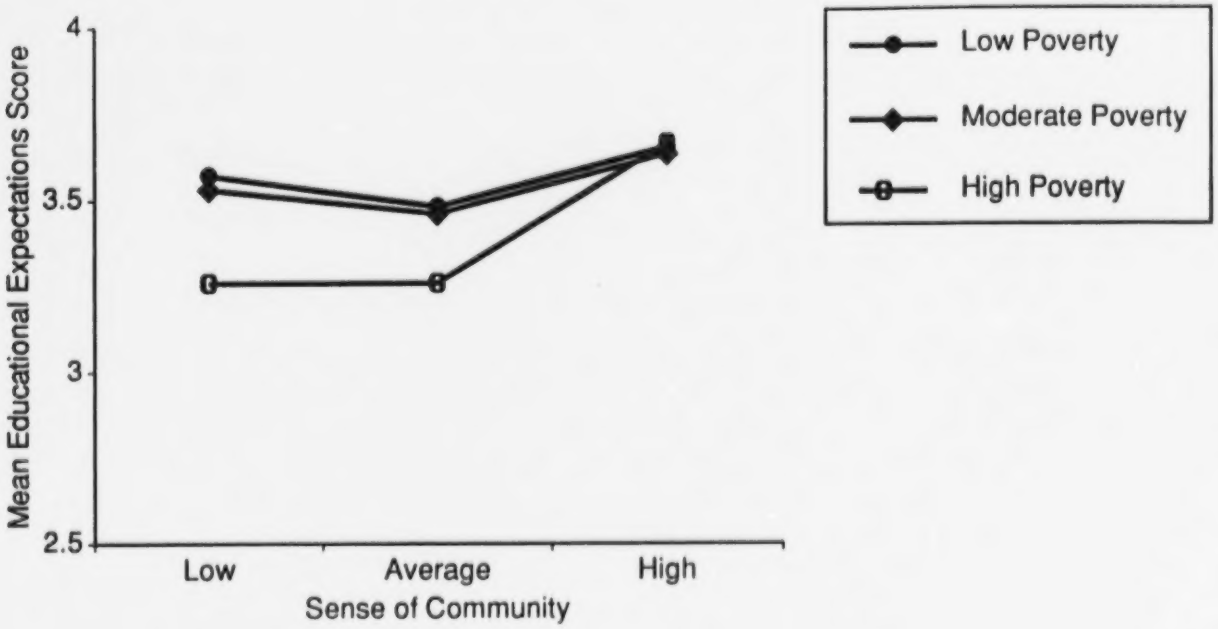

Fig. 7. Altruistic Behavior

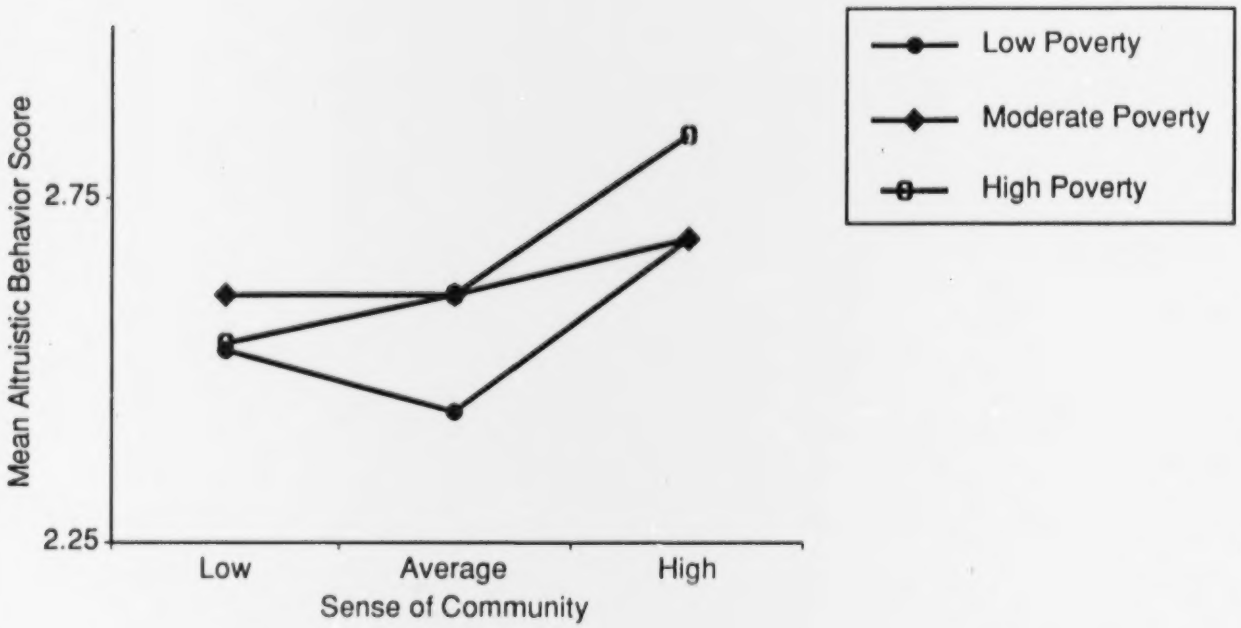

Fig. 8. Sense of Efficacy

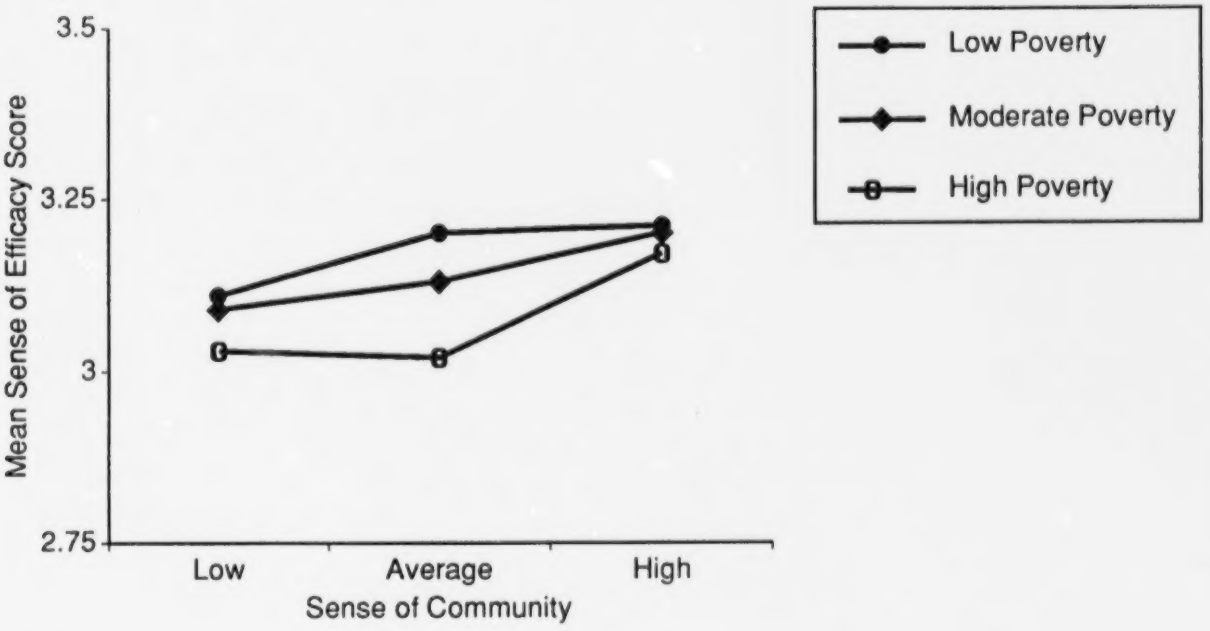

Fig. 9. Cigarette Smoking